Office Action Summary	Application No.	Applicant(s)	
	09/824,748	TANAKA, ATSUSHI	
	Examiner	Art Unit	
	MANSOUR M SAID	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27,29,32 and 33* is/are rejected.

7)☒ Claim(s) *28 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Morishita et al. (5,627,565; hereinafter referred to as Morishita).

As to claim 1, Morishita teaches a coordinate input apparatus for calculating a coordinate corresponding to a position of a light spot with which an input screen is irradiated (figures 1-2, column 2, lines 19-38 and column 10, lines 23-32), comprising a sensor array configured in such a manner that a plurality of optical conversion elements is arranged (column 5, lines 12-35; column 5, lines 47-51 and column 17, lines 29-43); coordinate computing means for successively calculating coordinate data of the light spot from the output of the sensor array (column 11, lines 19-55); and determining means for determining a readout portion of the sensor array from the coordinate data whose ordinal number precedes a predetermined ordinal number at the time of calculating the coordinate data of the predetermined ordinal number (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67); wherein the coordinate computing means calculates the coordinate data of the ordinal number based on the output from the readout portion determined by the determining means (column 11, lines 40-50 and column 12, lines 35-67).

As to claim 2, Morishita teaches wherein the plurality of optical/electrical conversion elements of the sensor array is linearly arranged (column 19, lines 42-47) and wherein the coordinate data of the light spot can be read out with each of blocks into which the sensor array is split as a unit (column 20, lines 5-30).

As to claim 3, Morishita teaches wherein the coordinate computing means calculates the coordinate data from a peak value of the output of the sensor array (figures 2-3 and column 11, lines 19-50).

As to claim 4, Morishita teaches wherein the coordinate computing means characterized by performing focus adjustment so that the width of the image of the light spot is several times as large as the pixel of the optical/ electrical conversion element calculates the coordinate data from the peak value of the output of the sensor array (column 5, lines 12-27 and column 10, lines 23-40).

As to claim 5, Morishita teaches wherein coordinate computing means characterized by performing focus adjustment so that the width of the image of the light spot is several times as large as the pixel of the optical/electrical conversion element calculates the coordinate data from the peak value of the output of the sensor array (column 5, lines 12-27 and column 10, lines 23-40).

As to claim 6, Morishita teaches a coordinate inputting method of applying irradiation light to a predetermined position on an image input screen by operation of a designation device to generate a light spot, and obtaining coordinate data of the light spot by optical/electrical conversion of a sensor array (column 5, lines 12-27 and column 10, lines 23-40), comprising steps of determining a readout portion of the sensor array from the coordinate data whose ordinal

number equals a number immediately before a predetermined ordinal number at the time of calculating coordinate data of the predetermined ordinal number, and obtaining an output partially from a predetermined number of optical/electrical conversion elements corresponding to the readout portion determined in the sensor array (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67), calculating the coordinate data of the predetermined ordinal number (column 11, lines 40-50), and generating a coordinate output signal corresponding to a predetermined position of the coordinate input screen (figures 1-2 & figure 20, column 9, lines 55-67, column 2, lines 20-53 and column 23, lines 35-64).

As to claim 7, Morishita teaches wherein the each photoelectric element is linearly arranged (column 19, lines 42-47), and wherein readout is performed with each predetermined block into which the sensor array is split as a unit (column 20, lines 5-30).

As to claim 8, Morishita teaches wherein the coordinate data is calculated from the peak value of the output of the sensor array (column 11, lines 20-50 and column 12, lines 50-67).

As to claim 9, Morishita teaches wherein the coordinate data is calculated from the peak value of the output of the sensor array (column 11, lines 20-50 and column 12, lines 50-67).

As to claim 10, Morishita teaches wherein focus adjustment is performed so that the image of the light spot has an image width several times as large as the pixel of the optical/electrical conversion element (column 5, lines 12-27 and column 10, lines 23-40).

As to claim 27, Morishita teaches a coordinate input apparatus for calculating a coordinate corresponding to a position of a light spot with which an input screen is irradiated (figures 1-2, and column 10, lines 23-32), comprising a sensor array configured in such a manner that a plurality of optical/electrical conversion elements is arranged (column 5, lines 12-35;

column 5, lines 47-51 and column 17, lines 29-43); coordinate computing means for successively calculating coordinate data of the light spot from the output of the sensor array (column 11, lines 19-55); and determining means for determining a readout-start portion of the sensor array from the coordinate data whose ordinal number precedes a predetermined ordinal number at the time of calculating the coordinate data of the predetermined ordinal number (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67), wherein the coordinate computing means calculates the coordinate data of the ordinal number based on the output from the readout-start portion determined by the determining means (column 11, lines 40-50 and column 12, lines 35-67).

As to claim 29, Morishita teaches a coordinate inputting method of applying irradiation light to a predetermined position on an image input screen by operation of a designation device to generate a light spot, and obtaining coordinate data of the light spot by optical/electrical conversion of a sensor array (column 5, lines 12-27 and column 10, lines 23-40), comprising steps of determining a readout-start portion of the sensor array from the coordinate data whose ordinal number equals a number immediately before a predetermined ordinal number at the time of calculating coordinate data of the predetermined ordinal number (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67); and obtaining an output partially from a predetermined number of optical/electrical conversion elements corresponding to the readout portion determined in the sensor array (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67), calculating the coordinate data of the predetermined ordinal number (column 11, lines 40-50), and generating a coordinate output signal corresponding to a predetermined

position of the coordinate input screen (figures 1-2 & figure 20, column 9, lines 55-67and column 23, lines 35-64).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishita in view of Hauck.

As to claim 11, Morishita teaches an information display system configured such a manner as to comprise a coordinate input apparatus applying light from a designation device to a coordinate input screen to generate a light spot (figures 1-2 and column 10, lines 23-32), detecting the light spot to generate a coordinate output signal corresponding to a predetermined position of the coordinate input screen (figures 1-2 & figure 20, column 9, lines 55-67, and column 23, lines 35-64); the coordinate input apparatus (figures 1-2 and column 9, lines 25-67) comprising a sensor array configured in such a manner that a plurality of optical/electrical conversion elements is arranged (column 5, lines 12-35; column 5, lines 47-51 and column 17, lines 29-43); coordinate computing means for successively calculating coordinate data of the light spot from the output of the sensor array (column 11, lines 19-55); and determining means for determining a readout portion of the sensor array from the coordinate data whose ordinal number precedes a predetermined ordinal number at the time of calculating the coordinate data

of the predetermined ordinal number (figures 2 & 11, (column 11, lines 19-55) and (column 12, lines 35-67), wherein the coordinate computing means calculates the coordinate data of the predetermined ordinal number, based on the output from the readout portion determined by the determining means. (column 11, lines 40-50 and column 12, lines 35-67).

Morishita does not expressly teach a display projecting information inputted by the coordinate input apparatus onto the coordinate input screen, based on the coordinate output signal.

However, Hauck teaches a display projecting information inputted by the coordinate input apparatus onto the coordinate input screen, based on the coordinate output signal (figure 1, column 4, lines 39-56 and column 4, line 66 through column 5, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Hauck's system having projecting system into Morishita's device so that the view area can be modified in accordance with the information contained in the coordinate reference signals (column 4, lines 54-56).

As to claim 12, Morishita teaches wherein the sensor array is configured in such a manner that a plurality of photoelectric elements is linearly arranged (column 19, lines 42-47), and readout is possible with each predetermined block into which the sensor array is split as a unit (column 20, lines 5-30).

As to claim 13, Morishita teaches wherein the coordinate computing means calculates the coordinate data from the peak value of the output of the sensor array (column 11, lines 20-50 and column 12, lines 50-67).

As to claim 14, Morishita teaches wherein the coordinate computing means calculates the coordinate data from the peak value of the output of the sensor array (column 11, lines 20-50 and column 12, lines 50-67).

As to claim 15, Morishita teaches wherein the designation device has light emission control means for controlling an emission state of irradiating lights (column 33, lines 64-67 and column 34, lines 1-21), and wherein focus adjustment is performed so that the image of the light spot has an image width several times as large as the pixel of the optical/electrical conversion element (column 5, lines 12-27 and column 10, lines 23-40).

As to claim 16, Morishita teaches wherein the designation device has light emission control means for controlling an emission state of irradiating lights (column 33, lines 64-67 and column 34, lines 1-21), and wherein focus adjustment is performed so that the image of the light spot has an image width several times as large as the pixel of the optical/electrical conversion element (column 5, lines 12-27 and column 10, lines 23-40).

As to claim 17, Morishita teaches wherein the designation device has light emission control means for controlling an emission state of irradiating lights (column 33, lines 64-67 and column 34, lines 1-21), and wherein focus adjustment is performed so that the image of the light spot has an image width several times as large as the pixel of the optical/electrical conversion element (column 5, lines 12-27 and column 10, lines 23-40).

5. Claims 18-26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishita in view of Hauck (5,515,079).

As to claims 18-26 and 31-33, Morishita teaches all claimed limitations except that a computer readable memory for storing a computer program executing computers wherein the computer is the coordinate computing means or determining means.

However, Hauck teaches a computer readable memory for storing a computer program executing computers wherein the computer is the coordinate computing means or determining means (figure 3 and column 5, line 60 through column 6, line 15.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Hauck's system having computer input system into Morishita's device so that the output signals produced by the signal processor appear to be conventional graphic tablet signals which the computer utilizes to initiate point, click and drag subroutines (column 6, lines 23).

Allowable Subject Matter

6. Claims 28 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, such as "**wherein the determining means further predicts order of readout of the sensor array predicted from the coordinate data whose ordinal number precedes the predetermined ordinal number, and if there is no output from the readout-start portion determined by the determining means, readout is performed in accordance with the order".**

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiramatsu (6,339,748 B1) teaches coordinate input system and display apparatus.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mansour M. Said** whose telephone number is **(703) 306-5411**.

The examiner can normally be reached on Monday through Thursday from 8:30 a.m. to 6:00 p.m. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Shalwala Bipin**, can be reached at **(703) 305-4938**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer service Office

whose telephone number is (703) 306-0377.

November 10, 2004

Mansour M. Said

BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600